

Application No.: 10/538,522  
Amendment dated: November 26, 2007  
Reply to Office Action of June 25, 2007  
Attorney Docket No.: 21295.0106US1 (E0664US)

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### REMARKS/ARGUMENTS

The drawings had been objected to. Paragraphs [0026] and [0063] of the Specification have been amended to traverse the objections to the drawings.

Amendment to paragraph [0012] of the Specification filed on July 24, 2007, had been objected to. This amendment has been reversed. The content of paragraph [0012] of the Specification is now identical to its content as filed.

Claims 1-16 are pending in this application. Claim 1 has been amended.

Claims 1-16 had been rejected under 35 U.S.C. §112, first paragraph. Claim 1 has been amended to remove the language causing the rejection. It is believed that this Claim is now in compliance.

Claims 1-2, 5-9, 11, and 13 had been rejected under 35 U.S.C. §102(b) over Nishi, US 2002/0036762 A1.

It is well established that a claim is anticipated under 35 U.S.C. §102, only if each and every element of the claim is found in a single prior art reference.<sup>1</sup> Moreover, to anticipate a claim under 35 U.S.C. §102, a single source must contain each and every element of the claim "arranged as in the claim."<sup>2, 3</sup> Missing elements may not be supplied by the knowledge of one skilled in the art or the disclosure of another reference.<sup>4</sup> If each and every element of a claim is not found in a single reference, there can be no anticipation.

Claim 1 comprises the element of a light source generating an illumination light beam of the reflected-light microscope directed through a lens along an illumination

<sup>1</sup> Verdegaal Bros. v. Union Oil Co. of California, 814 F.2d 628, 631, 2 U.S.P.Q.2d 1051, 1053 (Fed. Cir. 1987).

<sup>2</sup> Structural Rubber Prods. Co. v. Park Rubber Co., 749 F.2d 707, 716, 223 U.S.P.Q. 1264, 1271 (Fed. Cir. 1984).

<sup>3</sup> Lewmar Marine Inc. v. Barient, Inc., 827 F.2d 744, 747, 3 U.S.P.Q. 2d 1766, 1768 (Fed. Cir. 1987), cert. denied, 484 U.S. 1007 (1988).

<sup>4</sup> Titanium Metals Corp. v. Banner, 778 F.2d 775, 780, 227 U.S.P.Q. 773, 777 (Fed. Cir. 1985).

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beam path and onto a sample, the lens having a pupil plane and being disposed in a detection light path.

Nishi discloses an apparatus, the purpose of which is "to accurately transfer the pattern on the reticle R onto the wafer (W1 or W2)", see paragraph [0130] of Nishi.

Examiner calls the Nishi's device "a reflected-light microscope" and equates the sample 19 of the present invention with the wafers W1 or W2 of Nishi and the lens 17 of the present invention with the projection optical system PL of Nishi; see first paragraph of page 5 of the pending Office Action.

Applicants respectfully disagree. The wafers of Nishi are not being observed through PL as they would be if they were samples in a microscope in which PL is a lens, as the Examiner suggests. Nishi's device is not a microscope at all and, contrary to the present invention, does not contain an illumination light beam of the reflected-light microscope.

Furthermore, while in the present invention the lens is positioned on the illumination path, in Nishi, on the contrary, PL is not positioned on an illumination beam path, as the reticle R stands in the way of the illumination. In fact, the entire purpose of the illumination arrangement in Nishi is to illuminate the reticle, not the wafers.

In Nishi, neither the sample nor the pupil plane nor the projection optical system PL is reached by the illumination light beam: the illumination light beam only illuminates the pattern on the reticle to "transfer the pattern on the reticle R onto the wafer".

Additionally, Nishi does not have a detection light path and the projection optical system PL of Nishi (which the Examiner had equated with the lens of the present invention) is not disposed in a detection light path, again, contrary to the present invention.

As explained herein, the aforementioned element of Claim 1 is not taught or suggested in Nishi, any other publication cited by the Examiner in this Office Action, or

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their combination. Therefore, Claim 1 is patentable and nonobvious over Nishi under 35 U.S.C. §102(b) and should be allowed.

The above-presented argument also supports patentability of Claims 2, 5-9, 11, and 13. Allowance of the referenced Claims is respectfully solicited.

Claim 10 had been rejected under 35 U.S.C. §103(a) over Nishi. This rejection is respectfully traversed for the following reasons.

For an obviousness rejection to be proper, the Patent Office must meet the burden of establishing a prima facie case of obviousness. The Patent Office must meet the burden of establishing that all elements of the invention are disclosed in the cited publications, which must have a suggestion, teaching or motivation for one of ordinary skill in the art to modify a reference or combined references.<sup>5</sup> The cited publications should explicitly provide a reasonable expectation of success, determined from the position of one of ordinary skill in the art at the time the invention was made.<sup>6</sup>

Claim 10 comprises a light source generating an illumination light beam of the reflected-light microscope directed through a lens along an illumination beam path and onto a sample, the lens having a pupil plane and being disposed in a detection light path.

As explained herein, this element is not taught or suggested in Nishi, any other publication cited by the Examiner in this Office Action, or their combination. Therefore, Claim 10 is patentable and nonobvious over Nishi under 35 U.S.C. §103(a) and should be allowed.

Claim 3 had been rejected under 35 U.S.C. §103(a) over Nishi in view of Noguchi et al., US 6,485,891 B1. This rejection is respectfully traversed for the following reasons.

For an obviousness rejection to be proper, the Patent Office must meet the burden of establishing a prima facie case of obviousness. The Patent Office must meet the

<sup>5</sup> In re Lee, 277 F.3d 1338, 61 U.S.P.Q.2d 1430 (Fed. Cir. 2002).

<sup>6</sup> In re Fine, 5 U.S.P.Q.2d 1596, 1598 (Fed. Cir. 1988); In re Wilson, 165 U.S.P.Q. 494, 496 (C.C.P.A. 1970); Amgen v. Chugai Pharmaceuticals Co., 18 U.S.P.Q.2d, 1016, 1023 (Fed. Cir. 1996).

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burden of establishing that all elements of the invention are disclosed in the cited publications, which must have a suggestion, teaching or motivation for one of ordinary skill in the art to modify a reference or combined references.<sup>7</sup> The cited publications should explicitly provide a reasonable expectation of success, determined from the position of one of ordinary skill in the art at the time the invention was made.<sup>8</sup>

Claim 3 comprises a light source generating an illumination light beam of the reflected-light microscope directed through a lens along an illumination beam path and onto a sample, the lens having a pupil plane and being disposed in a detection light path.

As explained herein, this element is not taught or suggested in Nishi, Noguchi, any other publication cited by the Examiner in this Office Action, or their combination. Therefore, Claim 3 is patentable and nonobvious over Nishi and Noguchi under 35 U.S.C. §103(a) and should be allowed.

Claim 4 had been rejected under 35 U.S.C. §103(a) over Nishi in view of Komatsuda et al., US 2004/0104359 A1. This rejection is respectfully traversed for the following reasons.

For an obviousness rejection to be proper, the Patent Office must meet the burden of establishing a prima facie case of obviousness. The Patent Office must meet the burden of establishing that all elements of the invention are disclosed in the cited publications, which must have a suggestion, teaching or motivation for one of ordinary skill in the art to modify a reference or combined references.<sup>9</sup> The cited publications should explicitly provide a reasonable expectation of success, determined from the position of one of ordinary skill in the art at the time the invention was made.<sup>10</sup>

<sup>7</sup> In re Lee, 277 F.3d 1338, 61 U.S.P.Q.2d 1430 (Fed. Cir. 2002).

<sup>8</sup> In re Fine, 5 U.S.P.Q.2d 1596, 1598 (Fed. Cir. 1988); In re Wilson, 165 U.S.P.Q. 494, 496 (C.C.P.A. 1970); Amgen v. Chugai Pharmaceuticals Co., 18 U.S.P.Q.2d, 1016, 1023 (Fed. Cir. 1996).

<sup>9</sup> In re Lee, 277 F.3d 1338, 61 U.S.P.Q.2d 1430 (Fed. Cir. 2002).

<sup>10</sup> In re Fine, 5 U.S.P.Q.2d 1596, 1598 (Fed. Cir. 1988); In re Wilson, 165 U.S.P.Q. 494, 496 (C.C.P.A. 1970); Amgen v. Chugai Pharmaceuticals Co., 18 U.S.P.Q.2d, 1016, 1023 (Fed. Cir. 1996).

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Claim 4 comprises a light source generating an illumination light beam of the reflected-light microscope directed through a lens along an illumination beam path and onto a sample, the lens having a pupil plane and being disposed in a detection light path.

As explained herein, this element is not taught or suggested in Nishi, Komatsuda, any other publication cited by the Examiner in this Office Action, or their combination. Therefore, Claim 4 is patentable and nonobvious over Nishi and Komatsuda under 35 U.S.C. §103(a) and should be allowed.

Claim 12 had been rejected under 35 U.S.C. §103(a) over Nishi in view of Fay et al., U.S. 5,006,488. This rejection is respectfully traversed for the following reasons.

For an obviousness rejection to be proper, the Patent Office must meet the burden of establishing a prima facie case of obviousness. The Patent Office must meet the burden of establishing that all elements of the invention are disclosed in the cited publications, which must have a suggestion, teaching or motivation for one of ordinary skill in the art to modify a reference or combined references.<sup>11</sup> The cited publications should explicitly provide a reasonable expectation of success, determined from the position of one of ordinary skill in the art at the time the invention was made.<sup>12</sup>

Claim 12 comprises a light source generating an illumination light beam of the reflected-light microscope directed through a lens along an illumination beam path and onto a sample, the lens having a pupil plane and being disposed in a detection light path.

As explained herein, this element is not taught or suggested in Nishi, Fay, any other publication cited by the Examiner in this Office Action, or their combination. Therefore, Claim 12 is patentable and nonobvious over Nishi and Fay under 35 U.S.C. §103(a) and should be allowed.

<sup>11</sup> In re Lee, 277 F.3d 1338, 61 U.S.P.Q.2d 1430 (Fed. Cir. 2002).

<sup>12</sup> In re Fine, 5 U.S.P.Q.2d 1596, 1598 (Fed. Cir. 1988); In re Wilson, 165 U.S.P.Q. 494, 496 (C.C.P.A. 1970); Amgen v. Chugai Pharmaceuticals Co., 18 U.S.P.Q.2d, 1016, 1023 (Fed. Cir. 1996).

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Claims 14 and 15 had been rejected under 35 U.S.C. §103(a) over Nishi in view of Watanabe et al., U.S. 6,384,967. This rejection is respectfully traversed for the following reasons.

For an obviousness rejection to be proper, the Patent Office must meet the burden of establishing a prima facie case of obviousness. The Patent Office must meet the burden of establishing that all elements of the invention are disclosed in the cited publications, which must have a suggestion, teaching or motivation for one of ordinary skill in the art to modify a reference or combined references.<sup>13</sup> The cited publications should explicitly provide a reasonable expectation of success, determined from the position of one of ordinary skill in the art at the time the invention was made.<sup>14</sup>

Claims 14 and 15 comprise a light source generating an illumination light beam of the reflected-light microscope directed through a lens along an illumination beam path and onto a sample, the lens having a pupil plane and being disposed in a detection light path.

As explained herein, this element is not taught or suggested in Nishi, Watanabe, any other publication cited by the Examiner in this Office Action, or their combination. Therefore, Claims 14 and 15 are patentable and nonobvious over Nishi and Watanabe under 35 U.S.C. §103(a) and should be allowed.

Claim 16 had been rejected under 35 U.S.C. §103(a) over Nishi in view of McCoy et al., US 5,838,450. This rejection is respectfully traversed for the following reasons.

For an obviousness rejection to be proper, the Patent Office must meet the burden of establishing a prima facie case of obviousness. The Patent Office must meet the burden of establishing that all elements of the invention are disclosed in the cited publications, which must have a suggestion, teaching or motivation for one of ordinary

<sup>13</sup> In re Lee, 277 F.3d 1338, 61 U.S.P.Q.2d 1430 (Fed. Cir. 2002).

<sup>14</sup> In re Fine, 5 U.S.P.Q.2d 1596, 1598 (Fed. Cir. 1988); In re Wilson, 165 U.S.P.Q. 494, 496 (C.C.P.A. 1970); Amgen v. Chugai Pharmaceuticals Co., 18 U.S.P.Q.2d, 1016, 1023 (Fed. Cir. 1996).

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skill in the art to modify a reference or combined references.<sup>15</sup> The cited publications should explicitly provide a reasonable expectation of success, determined from the position of one of ordinary skill in the art at the time the invention was made.<sup>16</sup>

Claim 16 comprises a light source generating an illumination light beam of the reflected-light microscope directed through a lens along an illumination beam path and onto a sample, the lens having a pupil plane and being disposed in a detection light path.

As explained herein, this element is not taught or suggested in Nishi, McCoy, any other publication cited by the Examiner in this Office Action, or their combination. Therefore, Claim 16 is patentable and nonobvious over Nishi and McCoy under 35 U.S.C. §103(a) and should be allowed.

It is believed that the present application is in condition for allowance. A Notice of Allowance is respectfully solicited in this case. Should any questions arise, the Examiner is encouraged to contact the undersigned.

Respectfully submitted,

HOUSTON ELISEEVA LLP

By /Maria M. Eliseeva/

Maria M. Eliseeva  
Registration No.: 43,328  
Tel.: 781 863 9991  
Fax: 781 863 9931

4 Militia Drive, Suite 4  
Lexington, Massachusetts 02421-4705  
Date: November 26, 2007

<sup>15</sup> In re Lee, 277 F.3d 1338, 61 U.S.P.Q.2d 1430 (Fed. Cir. 2002).

<sup>16</sup> In re Fine, 5 U.S.P.Q.2d 1596, 1598 (Fed. Cir. 1988); In re Wilson, 165 U.S.P.Q. 494, 496 (C.C.P.A. 1970); Amgen v. Chugai Pharmaceuticals Co., 18 U.S.P.Q.2d, 1016, 1023 (Fed. Cir. 1996).